

Appl. No. 10/530,647
Amdt. Dated April 4, 2008
Reply Office Action mailed November 20, 2007

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method for manufacturing a glass substrate for an information recording medium manufactured by polishing the surface of a raw glass plate, the method comprising:

performing a first polishing process to roughly polish the surface of the raw glass plate to form a roughly polished raw glass plate ~~be smooth~~; and

performing a second polishing process to finely polish the surface of the roughly polished raw glass plate ~~to be smoother~~;

wherein the second polishing process includes two stages:

pre-polishing with a soft polisher and a polishing agent including abrasive grains of cerium oxide; and

post-polishing with a polishing agent including abrasive grains of silicon oxide;
and

wherein, a rinsing process is performed between the pre-polishing and the post-polishing ~~to rinse~~ comprising rinsing the raw glass plate ~~after the pre-polishing~~ with a washing liquid while sliding the raw glass plate on a surface of the soft polisher ~~to wash away the abrasive grains collected in the polishing pad in pre-polishing during the rinsing process.~~

2. (Currently Amended) The method for manufacturing a glass substrate for the information recording medium according to claim 1, wherein the abrasive grains of cerium oxide have a mean grain diameter of 1.5 μm or less and are smaller than a nap formation hole for the soft polisher ~~polishing pad~~.

Appl. No. 10/530,647

Amdt. Dated April 4, 2008

Reply Office Action mailed November 20, 2007

3. (Currently Amended) The method for manufacturing a glass substrate for the information recording medium according to claim 2, wherein the abrasive grains of silicon oxide have a grain diameter that is smaller than the grains of cerium oxide, a mean grain diameter (D_{50}) of less than or equal to $0.2\ \mu\text{m}$, and are smaller than an ~~the~~ aperture diameter of a ~~the~~ nap formation hole for the soft polisher ~~polishing pad~~.

4. (Original) The method for manufacturing a glass substrate for the information recording medium according to claim 1, wherein the second polishing process has a total task time of 7 to 45 minutes.

5. (Original) The method for manufacturing a glass substrate for the information recording medium according to claim 1, wherein the post-polishing has a task time of 1 to 40 minutes.

6. (Original) The method for manufacturing a glass substrate for the information recording medium according to claim 1, wherein the rinsing process has a task time of 1 to 20 minutes.

7. (Currently Amended) The method for manufacturing a glass substrate for the information recording medium according to claim 1, wherein in the rinsing process, a load applied to the raw glass plate by the surface of the soft polisher ~~polishing pad~~ is lower than ~~that~~ a load applied to the raw glass plate by the surface of the soft polisher in the pre-polishing stage.

8. (Currently Amended) The method for manufacturing a glass substrate for the information recording medium according to claim 1, wherein in the rinsing process, load applied to the raw glass plate by the surface of the soft polisher ~~polishing pad~~ is the same as or lower than ~~that~~ a load applied to the raw glass plate by the surface of the soft polisher in the post-polishing stage.

Appl. No. 10/530,647

Amdt. Dated April 4, 2008

Reply Office Action mailed November 20, 2007

9. (Currently Amended) The method for manufacturing a glass substrate for the information recording medium according to claim 1, wherein ~~load related to the rinsing process~~ a load applied to the raw glass plate by the surface of the soft polisher during the rinsing process is 25 to 70 g/cm².

10 - 13 (Cancelled)

14. (Currently Amended) The method for manufacturing a glass substrate for the information recording medium according to claim 1, wherein the abrasive grains of silicon oxide have a grain diameter that is smaller than the grains of cerium oxide, a mean grain diameter of less than or equal to 0.2 μm , and are smaller than an ~~the~~ aperture diameter of a nap formation hole for the soft polisher ~~polishing pad~~.

15. (Original) The method for manufacturing a glass substrate for the information recording medium according to claim 2 wherein the second polishing process has a total task time of 7 to 45 minutes.

16. (Original) The method for manufacturing a glass substrate for the information recording medium according to claim 2, wherein the post-polishing has a task time of 1 to 40 minutes.

17. (Original) The method for manufacturing a glass substrate for the information recording medium according to claim 2 wherein the rinsing process has a task time of 1 to 20 minutes.

18. (Currently Amended) The method for manufacturing a glass substrate for the information recording medium according to claim 2, wherein in the rinsing process, a load applied to the raw glass plate by the soft polisher ~~polishing pad~~ is lower than a load applied to the raw glass plate by the soft polisher ~~that~~ in the pre-polishing stage.

Appl. No. 10/530,647

Amdt. Dated April 4, 2008

Reply Office Action mailed November 20, 2007

19. (Currently Amended) The method for manufacturing a glass substrate for the information recording medium according to claim 2, wherein in the rinsing process, load applied to the raw glass plate by the soft polisher polishing pad is the same as or lower than ~~that~~ a load applied to the raw glass plate by the soft polisher ~~that~~ in the post-polishing stage.

20. (Currently Amended) The method for manufacturing a glass substrate for the information recording medium according to claim 2, a load applied to the raw glass plate by the surface of the soft polisher during the rinsing process ~~wherein load related to the rinsing process~~ is 25 to 70 g/cm².